

ABSTRACT

Apparatus and method are provided for separating and stripping suspensions comprising catalyst particles transported in vapors from the fluid catalytic cracking riser/reactor. Particles are disentrained from vapor in a vortex zone 112 of the primary cyclonic separator 100. The disentrained particles enter a stripping zone 126, wherein the particles are contacted with a stripping gas 136 to recover vapors entrained and adsorbed onto the catalyst. The stripping gas 136 enters stripping zone 126 via perforations in the wall of the cyclone 100. The stripping gas 136 limits the residual catalytic conversion of hydrocarbon vapors and formation of delta-coke on the catalyst. Stripped catalyst is delivered from the cyclone stripping zone 126 via a dipleg 130 connected to a bottom of the cyclone 100, and enters an FCC stripping vessel. Solids-lean stripping gas and vapors from the catalyst particles are blended with the carrier fluid and discharged from the cyclone.